

ATMI-521  
Serial No. 09/929,564

## Section II (Remarks)

### Rejection of Claims 1-21, 23-49 and 51 Under 35 U.S.C. § 102(e), and Traversal Thereof

In the May 5, 2004 Office Action, claims 1-21, 23-49 and 51 were finally rejected under 35 U.S.C. § 102(e), including:

- (i) a rejection of claim 51 as anticipated by U.S. Patent No. 6,527,818 to Hattori et al. ("Hattori"), and
- (ii) a rejection of claims 1-21 and 23-49 as anticipated by Yano U.S. Patent No. 6,454,819 ("Yano").

Such rejection of claims is traversed in application to the claims as herein amended, and reconsideration of the patentability of the now-pending and amended claims 1, 3-21, 23-34, 43-49 and 51 is requested in light of the ensuing remarks.

### Patentable Distinction of Amended Claims 1, 3-21, 23-34, 43-49 and 51 Over the Cited Art

Claim 1 has been amended herein to recite the CMP slurry as comprising an abrasive that "consists essentially of organic polymer." Such "consists essentially of" terminology appropriately (see MPEP §2111.03) delimits the subject matter of the claim and distinguishes it over Yano, which requires composite particles as the abrasive component of the CMP composition disclosed in such reference – Yano describes such composite particles at column 3, lines 32-39:

**"composite particles having polymer particles and at least one of a metal compound portion or section (at least one of a metalloxane bond-containing section and a metal oxide particle section, provided that titanium is not the metal of the metalloxane bond-containing section) and a silica particle portion or section formed directly or indirectly on the polymer particles" (Yano, column 3, lines 32-39)**

ATMI-521  
Serial No. 09/929,564

Yano's particles therefore require the substantial presence of non-polymer components in the abrasive particle, namely, "a metal compound portion or section" and "a silica particle portion or section."

Since such metal compound and silica particle constituents must be present, and Yano contains no teaching, disclosure or suggestion to eliminate such constituents from his disclosed particles (and indeed, such elimination would defeat the express objectives of Yano's described invention – see for example column 2, lines 32-36 ("it is an object of the present invention to provide composite particles that exhibit adequate strength and hardness, excellent heat resistance, and suitable flexibility by providing metal compound sections in the interior and on the surface of the polymer particles" (emphasis added)) and column 2, lines 46-49 ("[i]t is another object of the present invention to provide a CMP slurry wherein a silicon compound section or metal compound section is provided in the polymer particles to give the surface thereof adequate strength and hardness..." (emphasis added)) of Yano.

Since Yano teaches explicitly that metal compound and silicon compound components are necessarily present in the abrasive disclosed in such reference, it is clear that Yano teaches away from the applicants' invention as claimed in amended claim 1.

The meaning of "teaching away" is clear and well-established. A reference "may be said to teach away when a person of ordinary skill, upon reading the reference,...would be led in a direction divergent from the path that was taken by the applicant." *Tec Air, Inc. v. Denso Mfg. Mich. Inc.*, 192 F.3d 1353,1360, 52 USPQ 2d 1294, 1298 (Fed. Cir. 1999).

That is the situation here.

Claim 1, and claims 3-21, 23-37 and 43-47 dependent thereunder, are correspondingly patentably demarcated over Yano and otherwise in form and condition for allowance.

Similar patentable distinction over Yano is present in claim 48, which as amended recites that the "abrasive consists essentially of poly(methyl methacrylate)," and in claim 49, dependent from claim 48.

ATMI-521  
Serial No. 09/929,564

Claim 51 has been rejected in the May 5, 2004 Office Action over Hattori. In response, claim 51 has been amended to recite, *inter alia*, that

**"said abrasive consists essentially of colloidal poly (methyl methacrylate), and wherein said composition is free of heteropolyacid,"**

thereby patentably demarcating over Hattori (which requires a heteropolyacid) as well as over Yano (which requires non-polymer abrasive constituents).

For all the foregoing reasons, claims 1, 3-21, 23-34, 43-49 and 51 are now in form and condition for allowance.

Entry of this Amendment under the provisions of 37 CFR 1.116 is requested, since this Amendment:

- (i) cancels claims (i.e., claims 2 and 35-42, which have been cancelled in conformity with prior amendment of claim 1 to remove recital of "a metal film" therefrom);
- (ii) overcomes the remaining grounds of rejection of the claims;
- (iii) requires no new search or consideration, since the revisions of the claims involve only transition language and limitation language already of record ("wherein said composition is free of heteropolyacid," as now recited in claim 51); and
- (iv) presents the claims in better form for consideration.

It is correspondingly requested that the examiner withdraw the rejections of the claims under §102(e), and hold the pending claims 1, 3-21, 23-34, 43-49 and 51 allowable.

**Petition Under 37 CFR 1.136 for One Month Extension of Time**

Petition hereby is made under the provisions of 37 CFR 1.136 for a one month extension of the term for response to the May 5, 2004 Office Action, extending the term for response to September 7, 2004.

The fee of \$110 specified in 37 CFR 1.136 for such extension of time is enclosed in the form of a Credit Card Authorization Form in such amount. It is requested and authorized that any

ATMI-521  
Serial No. 09/929,564

additional fee or amount properly payable in connection with the filing of this response, be charged to Deposit Account No. 08-3284 of Intellectual Property/Technology Law.

**CONCLUSION**

Claims 1, 3-21, 23-34, 43-49 and 51 as amended herein are fully patentably distinguished over the art and in form and condition for allowance. The examiner is respectfully requested to issue a Notice of Allowance for this application.

If any issues remain outstanding in connection with the entry of this amendment, Examiner Morgan is requested to contact the undersigned attorney at (919) 419-9350 to resolve same, so that the present application can be passed to issue at an early date.

Respectfully submitted,



Steven Hultquist  
Registration No. 28021  
Attorney for Applicants

INTELLECTUAL PROPERTY/  
TECHNOLOGY LAW  
P.O. Box 14329  
Research Triangle Park, NC 27709  
Phone: (919) 419-9350  
Fax: (919) 419-9354  
Attorney File No.: 2771-521